

Remarks

Reconsideration of this Application is respectfully requested.

Upon entry of the foregoing amendment, claims 1, 2, 4-13 and 28-31 are pending in the application, with claims 1, 28 and 30 being the independent claims. Claim 1 has been amended to include selected features of now canceled claim 3. Claim 28 has been amended to include selected features of claim 4. Claims 4 and 6 have been amended to change dependency. Claim 5 has been amended to correct a minor typographical error. Claims 3 and 14-27 are sought to be cancelled without prejudice to or disclaimer of the subject matter therein. New claims 29-31 are sought to be added. Support for new claims 29-31 is found in the original claims.

These changes are believed to introduce no new matter, and their entry is respectfully requested. Applicants believe these amendments do not necessitate further search or consideration by the Examiner.

Based on the above amendment and the following remarks, Applicants respectfully request that the Examiner reconsider all outstanding rejections and that they be withdrawn.

Rejections under 35 U.S.C. § 102

Claims 1-13 and 28 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,644,144 to Ray (hereinafter "Ray"). For the reasons set forth below, Applicants respectfully traverse this rejection.

Independent claim 1, as amended, recites in part, "forming a one cycle ladder structure using the first and second metal interconnect structures that *traverses the*

plurality of metal layers from a bottom metal layer to a top metal layer and back to the bottom metal layer" (*emphasis added*). Independent claim 1 has been amended to include features of now canceled dependent claim 3. With reference to the features of dependent claims 3-13, page 3 of the Office Action states:

Regarding claims 3-13, Ray further discloses that the conductive layers (12a-12d, Fig. 1) are completely programmable i.e. parallel, perpendicular, inverse connection of input terminals, etc. (Cols. 5-7), therefore, Ray anticipates the configurations and programming functions of claims 3-13 accordingly.

Applicants respectfully disagree. As stated on MPEP §2131 with regards to making an anticipation rejection under 35 U.S.C. §102 :

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference."
Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

Applicants respectfully submit that the Examiner has failed to point out where Ray expressly teaches "forming a one cycle ladder structure using the first and second metal interconnect structures that ***traverses the plurality of metal layers from a bottom metal layer to a top metal layer and back to the bottom metal layer***" as recited in independent claim 1, as amended (*emphasis added*). Since Ray does not teach each and every limitation of claim 1, Ray cannot anticipate claim 1.

Ray also fails to teach each and every element of independent claim 28, as amended. Independent claim 28 has been amended to include features of claim 4. Independent claim 28, as amended, recites in part, "forming a ***one cycle ladder structure in the shape of a cube*** using multiples of the first and second metal interconnect structure that traverse the plurality of metal layers from a bottom metal layer to a top

metal layer and back to the bottom metal layer" (*emphasis added*). Since the applied reference fails to expressly teach the limitations of claims 1 and 28, the applied reference cannot be used to be establish anticipation of claims 1 and 28. To make an anticipation rejection "[t]he identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). *See* MPEP §2131. Accordingly the rejection of claims 1 and 28 is traversed. Reconsideration and withdrawal are respectfully requested.

Claim 3 has been canceled thereby rendering its rejection moot. Dependent claims 2 and 4-13 depend from independent claim 1 and are patentable for at least the same reasons as independent claim 1 and further in view of their respective features. For example, dependent claim 5 recites in part, "forming the first and second supply potentials as ***two buses located in a central region of said cube-shaped structure*** so as to be accessible at each of the metal layers" (*emphasis added*). Claim 7 recites in part, "forming the first and second supply potentials as ***buses accessible at each of the metal layers***" (*emphasis added*). Accordingly the rejection of claims 1-13 and 28 is traversed. Reconsideration and withdrawal are respectfully requested.

New claims

New claims 29-31 have been added. Claim 29 depends from claim 28 and is patentable for at least the same reasons as claim 28 and further in view of its own respective features. New independent claim 30 includes features of claim 6. Independent claim 30 recites in part, "forming a one cycle ladder structure ***in the shape of a spiral that traverses the plurality of metal layers from a bottom metal layer to a top***

metal layer and back to the bottom metal layer" (*emphasis added*). Applicants respectfully submit that Ray fails to teach or suggest, among other features, the above recited limitation of claim 30. Claim 31 depends from claim 30 and is also patentable over Ray. Claim 31 recites, in part, "***forming the first and second supply potentials as buses accessible at each of the metal layers"***" (*emphasis added*) which is also not taught by Ray. Claims 29-31 are patentable over Ray for the above reasons. Applicants respectfully request that these claims be passed to allowance.

Conclusion

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.



Donald J. Featherstone
Attorney for Applicants
Registration No. 33,876

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1100 New York Avenue, N.W.
Washington, D.C. 20005-3934
(202) 371-2600
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